CLAIMS

WHAT IS CLAIMED IS:

1. A method for providing authentication in a virtual private network having an AAA server, the method comprising:

5 receiving a request from a remote user for connection with a virtual private network at a virtual home gateway;

associating the remote user with the virtual private network;

sending a request to authenticate the remote user from the virtual home gateway to the AAA server; and

10 connecting the remote user to the virtual private network if the AAA server authenticates the user.

2. The method of claim 1 wherein associating the remote user comprises receiving a virtual private network ID and address of an AAA server of the virtual

15 private network.

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3. The method of claim 2 wherein the virtual private network ID binds a profile of the virtual private network to a routing table of the virtual home gateway.

4. The method of claim 1 wherein associating the remote user comprises sending a request to a service provider AAA server to authorize the remote user.

5. The method of claim 4 wherein the service provider AAA server contains the address of the virtual private network's AAA server.

6. The method of claim 1 wherein sending a request to authenticate the remote user comprises routing the request using a customer routing table of the virtual private network.

7. The method of claim 1 wherein connecting the remote user to the virtual private network comprises setting up a PPP session for the remote user.

8. The method of claim 1 further comprising sending an accounting request to the virtual private network's AAA server.

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9. The method of claim 8 further comprising sending an accounting request to the service provider's AAA server.

10. The method of claim 9 wherein accounting information sent to the virtual private network's AAA server is different than the accounting information sent to the virtual private network's AAA server.

11. The method of claim 1 wherein associating a remote user with the virtual private network comprises identifying the virtual private network based on a domain name.

12. The method of claim 1 wherein associating a remote user with the virtual private network comprises identifying the virtual private network based on a dial-up phone number.

13. The method of claim 1 wherein associating a remote user with the virtual private network comprises identifying the virtual private network based on a circuit ID.

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14. A computer program product for providing authentication in a virtual private network having an AAA server, the product comprising:

code that receives a request from a remote user for connection with a virtual private network at a virtual home gateway;

5   code that associates the remote user with the virtual private network;

code that sends a request to authenticate the remote user from the virtual home gateway to the AAA server;

code that connects the remote user to the virtual private network if the AAA server authenticates the user; and

10   a computer-readable storage medium for storing the codes.

15. The product of claim 14 further comprising code that requests a service provider AAA server to authorize a remote user.

15   16. The product of claim 14 further comprising code that sends accounting requests to the virtual private network AAA server.

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17. The product of claim 14 further comprising code that binds a profile of the virtual private network to a routing table of the virtual home gateway.

18. A system for providing authentication in a virtual private network having an AAA server, the system comprising:

a virtual home gateway configured to receive requests from a remote user for connection with a virtual private network, send a request to authenticate the remote user to the AAA server of the virtual private network, and connect the remote user to the virtual private network;

a database for storing addresses of virtual private network AAA servers; and

a processor operable to look up the address of the virtual private network AAA server based on information received from the remote user.

19. The system of claim 18 wherein the information received from the remote user is a circuit ID.

20. The system of claim 18 wherein the information received from the remote user is domain name.

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21. The system of claim 18 wherein the information received from the remote user is a dial-up phone number.

22. The system of claim 18 further comprising a service provider AAA server coupled to the virtual home gateway and configured to authorize the remote user.

23. The system of claim 18 wherein the database includes virtual private network IDs used to bind virtual private network profiles to a routing table of the virtual home gateway.

24. The system of claim 23 wherein the virtual home gateway comprises a plurality of routing tables corresponding to different virtual private networks.

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